

material gas is cracked into smaller molecules, e.g. As₄ is cracked into As₂. The product gas is then led out of the apparatus 1.

Controlling temperatures, pressures, gas flows etc. in a cracker apparatus of the kind shown in FIG. 1 is well known as such, and therefore not discussed any further in this text.

The source material container 3 according to the invention has to be detached from the dispenser means 5 for various reasons, for example when the amount of solid 10 source material in the source material container 3 has reached a minimum value for the cracking process to work properly. Prior detaching the container 3 of FIG. 1 the process has to be stopped, i.e. electric power to the heating means 15 of the source material container is cut. After the apparatus 1 or at least the container 3 has cooled down to a suitable temperature for it to be handled, the vacuum vessel 19 is 15 detached from the dispenser means 5. This leaves the source material container 3 and the electrical resistive heating means 15 around it visible. It is now possible to either remove the heating means 15 separately or to detach it at the same time with the source material container 3. The container 3 is detached by opening the bolts 27. Now the container can be replaced with a new one, or it could be emptied, 20 cleaned or refilled and reassembled.

The mounting of the container is done by fitting the flanges 23 and 25 suitably together and then tightening the bolts 27. Then if the electrical heating means 15 was not already present on the container 3, it is mounted on the container 3. Now 25 the vacuum vessel 19 can be installed on the container 3 by setting the flanges 31 and 33 together and attaching them together with suitable connecting means, such as bolts or some quick coupling means (not shown in the figure). When the vacuum vessel 19 is mounted on the source material container 3 the galvanic connection of

4 0 0 6 5 0 2 3 - 0 1 2 5 0 2 0

metal rods 49 and 51 with metal rings 53 and 55 is formed automatically, as described above.

The descriptions above and the accompanying drawings should be interpreted in
5 an illustrative and not in a limited sense. While the invention has been disclosed
in connection with the preferred embodiment or embodiments thereof, it should
be understood that there may be other embodiments which fall within the spirit
and scope of the invention as defined by the following claims. For example
structural details, such as the size and form of metal rods 49 and 51 and rings 53
10 and 55, can be varied. Although the invention is illustrated in the figures as an
on-axis cracking apparatus it can be constructed as an off-axis apparatus as well.

What is claimed is:

1. Cracker apparatus, comprising
 - 15 a) a container for providing at least one gaseous crackable source material, which source material container is formed as a mainly cylindrical vessel having a closed first end part, an at least substantially open second end part and a mainly cylindrical mantle part between said end parts, said open second end part forming an outlet opening through which said gaseous crackable source material is arranged to flow out from said container,
 - 20 b) dispenser means for receiving said gaseous crackable source material from said container, said dispenser means comprising dispenser valve means for controlling the flow of said gaseous crackable source material through said dispenser means;
 - 25 c) cracker means for receiving said at least one gaseous crackable source material from said dispenser means;
- whereby said second end part of the source material container is arranged to be detachably coupled to said dispenser means, and the supply of new source

material into the source material container is arranged through said outlet opening when said container is detached from the dispenser means.

2. The cracker apparatus of claim 1 wherein the interior of the source material container is reachable only through said outlet opening.

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3. The cracker apparatus of claim 1 wherein the area of said outlet opening covers substantially the whole cross-sectional area of said second end part.

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4. The cracker apparatus of claim 1 wherein an electrical heating means is arranged around at least a substantial part of the source material container.

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5. The cracker apparatus of claim 4 wherein a vacuum vessel means is arranged detachably around the source material container and around the electrical heating means whereby a vacuum zone is formed around at least a substantial part of the source material container.

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6. The cracker apparatus of claim 5 wherein the electrical heating means is arranged detachably around at least a substantial part of the source material container.

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7. The cracker apparatus of claim 6 comprising

 - at least two substantially concentric metal circles arranged on the outside of the first end part of the source material container, the metal circles arranged in galvanic contact with the electrical heating means, and
 - at least two metal rods arranged on the inside of the vacuum vessel means, said metal rods being arranged into galvanic contact with said metal circles when the vacuum vessel means is attached hermetically around the source material container, whereby electrical power for the electrical heating means is arranged

from outside of the vacuum vessel means via said metal rods and said metal circles.

8. The cracker apparatus of claim 1 wherein crackable source material is arsenic.

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9. A cracker source material container for providing at least one gaseous crackable source material for a cracker means, which source material container is formed as a mainly cylindrical vessel having a closed first end part, an at least substantially open second end part and a mainly cylindrical mantle part between
10 said end parts, said open second end part forming an outlet opening through which said gaseous crackable source material is arranged to flow out from said container into said cracker means, which said second end part of the source material container is arranged to be detachably coupled to said cracker means, and the supply of new source material into the source material container is
15 arranged through said outlet opening when said container is detached from said cracker means.